



Environment Canada **Environnement Canada**

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Via Email

**Re: NWB2PEL0507/TR/I1 – BHP Billiton Diamonds Inc. – Amaruk Project –
Abandonment and Restoration Plan**

On behalf of Environment Canada (EC), I have reviewed the above mentioned application. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities for the enforcement of the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

BHP Billiton Diamonds Inc. has submitted an Abandonment and Restoration Plan for its Amaruk Project, a 50/50 joint ventured exploration program shared with Diamonds North. The area of this project surrounds much of Pelly Bay in the Gulf of Boothia, including the Hamlet of Kugaaruk. The exploration program's upcoming field season will be facilitated by a temporary camp that is located 45 km south of Kugaaruk. This camp can accommodate 25 people and has a coordinate of 68°07'35"N, 90°04'23"W.

The Abandonment and Restoration Plan presents final abandonment and seasonal shutdown procedures. The final abandonment and restoration procedures state that all of the project's structures and equipment will be removed from the project area to either a different project or to source in Yellowknife or Churchill. Kugaaruk residents will have an opportunity to purchase excess fuel. Remaining fuel drums, both empty and full, will be returned to Churchill for proper disposal. The proponent plans to resed scarred ground surfaces with ground cover vegetation produced at the Ekati Diamond Mine.

Seasonal shutdown procedures typically occur in late August and/or early September. Empty fuel drums are delivered to Churchill for proper disposal, the camp is winterized, and the generator, power lines, fuse boxes, and wood frame tent canvas skins are returned to their Yellowknife rental suppliers. Depending on the quality of drill results, drilling rigs will either be removed from the property to Kugaaruk or winterized (enclosed and sealed) at the last drill setup location or at the camp. Remaining pallets of salt and bentonite used to stabilize clay will be wrapped in tarps or stored in a plywood storage shed along with spare equipment and lubricants. Reclamation measures will be practiced at each drill site prior to drilling in a new location. When immediate reclamation cannot be achieved, continued treatment will occur until the site resembles its natural state.



Environment Canada recommends that the Nunavut Water Board consider the following advice when corresponding with the proponent regarding its Amaruk Project's Abandonment and Restoration Plan:

- The Plan indicates that drill cuttings will be flushed with fresh water to dilute saline residue produced from the use of CaCl or NaCl additives. Environment Canada recommends that the water used in this activity be discharged into a sump such that the contents do not enter any water body. The *Canadian Environmental Protection Act* lists CaCl as a toxic substance. The proponent shall therefore ensure that if CaCl is used as a drill additive, all sumps containing CaCl are properly constructed and located in such a manner as to ensure that the contents will not enter any water body.
- When rehabilitating scarred ground surfaces, Environment Canada strongly advises that only vegetation species native to the project area and appropriate for this activity be used.
- The proponent intends to spread accumulated drill cuttings from settling ponds and extracted cyclones in an effort to encourage the recovery of vegetation at sumps. Environment Canada recommends that all sumps be backfilled upon completion of the field season and contoured to match the surrounding landscape. Drill cuttings and sludge are to be deposited within sumps and covered with fill material or removed from the project area for proper disposal.
- Environment Canada recommends the use of an approved incinerator for the burning of combustible camp wastes.
- The proponent shall ensure that any non-combustible waste is disposed of appropriately at an approved facility.

If there are any changes in the proposed project, EC should be notified, as further review may be necessary. Please do not hesitate to contact me if you have any questions or comments with regards to the foregoing at (867) 975-4631 or by email via david.abernethy@ec.gc.ca.

Regards,

David W. Abernethy
Environmental Assessment Technician

cc. Colette Spagnuolo – Environmental Assessment / Contaminated Sites Specialist